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ABSTRACT

This study examines the nature of the initial implementation of a new multicultural sociology curriculum by eight teachers in the 11th- and 12th-grades of seven Israeli high schools. The study examined: (1) the extent and ways in which teachers reframe their theories of action as they learn to implement the new curriculum; (2) the factors that fostered and hindered reframing; and (3) the way teachers' constructs shaped the new curriculum. A variety of qualitative methods were used to gather data about the teachers' theories of action including focus group discussions, individual interviews, and classroom observation. Findings indicate that during the course of the implementation process half of the teachers made considerable modification of their theories of action. Teachers changed core assumptions about learning, teaching strategies, and role relations; however, they reframed their theories in very different ways. Factors found to foster reframing were staff development meetings, involvement in curriculum development, feedback processes, the quality of the curriculum materials, and the teacher's ability to take the stance of an inquirer. Factors hindering implementation and changes in theories of action were the attitudes, skills, professional commitments and workloads of teachers, and institutional norms. Teachers' experiences with implementing the curriculum led to significant changes in the shape, but not the basic principles and goals of the curriculum. (EH)

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Implementing a Multicultural Experiential Sociology Curriculum: Mutual Adaptation and Reframing Theories of Action

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Abstract

This study examines the nature of the initial implementation of a new multicultural sociology curriculum for Israeli secondary schools. It examined: (1) the extent and ways in which teachers reframe their theories of action as they learn to implement the new curriculum, (2) the factors that fostered and hindered reframing, and (3) the way teachers' constructs shaped the new curriculum. A variety of qualitative methods were used to gather data about the teachers' theories of action including focus groups discussions, individual interviews, and classroom observation. Our findings indicate that during the course of the implementation process half of the teachers made considerable modification of their theories of action. These teachers changed core assumptions about learning, teaching strategies, and role relations. However, they reframed their theories in very different ways. Factors found to foster reframing were staff development meetings, involvement in curriculum development, feedback processes, the quality of the curriculum materials, and the teacher's ability to take the stance of an inquirer. Factors found to hinder implementation and changes in theories of action were the attitudes, skills, professional commitments and workloads of teachers, and institutional norms. Teacher's experiences with implementing the curriculum lead to significant changes in the shape, but not the basic principles and goals of the curriculum.

Introduction

Most research (Fullan, 1982; Snyder, Bolin & Zumwalt,1992) has shown that mutual adaptation occurs in the process of successful implementation of innovations. Mutual adaptation is particularly important during the preliminary diffusion of an innovation since the functions of this trial phase of implementation are formative evaluation and adaptation of the innovation before it is widely disseminated. However, little research has examined what actually happens during this trial period. This study explores the nature of the mutual adaptation process that ocurred during the trial of a new multi-cultural experiential sociology curriculum for Israeli secondary schools.

This new curriculum is a planned top-down change in the goals, contents, role of the teacher, instructional strategies, materials, and evaluation methods which will eventually become the official curriculum for Israeli high schools. The curriculum goals and pedagogical principles are similar to those of the "new social studies" and of the affective trend in social studies curriculum (Marker & Meblinger, 1992). It combines an emphasis on experiential learning and sociological inquiry. Research about the implementation of similar curricula in the United States (Marker & Meblinger, 1992) found that their implementation was severely limited because these curricula were radically different from the professional orientations and capabilities of teachers and from their traditional conceptions of curricula. The new

Israeli sociology curriculum presents a similar challenge to the professional orientations of Israeli sociology teachers. Therefore, the process of curriculum implementation needs to be analyzed as a process of professional development in which teachers may change their theories of action.

This paper examines the mutual adaptation process during the first year of implementation at the level of the individual user. Argyris and Schon's (1974, 1996) theories of action model is used to analyze the individual teacher's interactions with the new curriculum and processes of learning. The study examines three questions:

(1) To what extent and in what ways do teachers reframe their theories of action as they learn to implement a new sociology curriculum?

(2) What factors enable and hinder reframing ?

(3) How do teachers' evolving constructs shape the new curriculum?

The framing of these three research questions represents an attempt to combine the mutual adaptation and enactment perspectives in the analyses of the curriculum implementation process.

Conceptions of the Curriculum Implementation Process

The mutual adaptation perspective views curriculum implementation as a process by which curriculum developers and curriculum users make adjustments in the curriculum. This perspective assumes that implementation should involve

adjustments in the interests and skills of users and in the goals and methods of the curriculum innovation. This implies negotiation and flexibility on the part of teachers and developers. The concept of mutual adaptation emerged out of research using the fidelity approach (Berman & McLauglin, 1977) which studied complex innovations which emphasized processes more than products. This perspective sees curriculum knowledge as one facet of a larger social system which cannot be taken for granted. In line with this perspective this study focuses on identifying the problems of implementation and the impact of the values and assumptions of those implementing the curriculum and their social context on the evolution of the curriculum .

The enactment perspective on curriculum change (Bussis, Chittenden & Amarel, 1976; Marker & Meblinger, 1992) places the changes in the teacher' thinking, feelings and assumptions at the center of the change process. According to this perspective curriculum materials and strategies are tools for students and teachers to use as the construct their own learning environments. Change is not merely an alteration in behavior, but a process of professional development for the teacher and the student. The process of enacting the curriculum is one of continual growth.

Argyris and Schon's model of theories of professional practice (1974) provides a conceptual framework for analyzing how teacher's thought and action change and the forces that enable and hinder these changes. According to their theory, teachers have at any point in time a theory of practice which is composed

of a set of interrelated theories of action in different situations. Theories of action have two levels-- that of an espoused theory and that of a theory-in-use. The espoused theory includes the thoughts and actions that are communicated to others to which a practitioner gives allegiance. The theory-in-use is the theory which governs his actions. The theory-in-use may or may not be compatible with the espoused theory. Both theories are delimited by governing variable and assumptions that may or may not be consonant with each other.

Theories of action may change to different degrees through interaction with the real world as a result of single or double looped learning. Argyris and Schon (1974, 1996) define single looped learning as changing strategies for action or assumptions underlying strategies in ways that leave the governing variables and values of theory of action unchanged. By double-looped leaning they mean learning that results in a change in the governing variables or values of the theory of action as well as strategies and assumptions. Argyris and Schon propose that these different patterns of change derive from the recognition and responses to five types of dilemmas: dilemmas of incongruity between the espoused theory and the theory-in-use, dilemmas of inconsistency in the governing variables of the theory-in-use, dilemmas of effectiveness, dilemmas of values, and dilemmas of testability.

Based on Argyris and Schon's model of theories of action this study hypothesized that the process of curriculum

implementation of the new sociology curriculum would entail different patterns of theory -building for different teachers. The use of the curriculum and interventions to promote its use would pose different dilemmas for different practitioners. Teachers would respond to these dilemmas in different ways. Argyris and Schon (1996) have found that there is an inherent tendency for practitioners to protect their theories in use from dilemma confrontation. Various tactics are used to maintain theories-in-use in the face of emerging dilemmas. In this study we try to identify emerging dilemmas and responses of teachers.

Factors Affecting Curriculum Implementation

The implementation of an innovation depends on a complex array of social, ideological, political, institutional, and professional factors and their interaction with the characteristics of the innovation and the process of its adoption and implementation. This study identifies factors in teacher characteristics and orientations, in the nature of the innovation, in the implementation strategy and process, and in the school situation that facilitated or hindered mutual adaption.

Characteristics of the innovation. Fullan (1982) identifies four major aspects of the innovation that impinge on implementation: need, clarity, complexity, and quality and practicality of materials. Implementation is correlated with perception of the innovation as addressing priority needs. Lack of clarity about the goals and means of the innovation has been

found in many studies to make implementation problematic. These studies assumed that clarity had to be achieved before implementation. But, Berman (1981) found that clarity generally develops as part and parcel of the implementation process. As adaptations are made participants become clear about their own philosophy and that of the innovation. Studies indicate that complexity creates problems for implementation. However, ambitious projects stimulate more change in the teacher (Berman & McLauglin, 1977). If complex innovations are made divisible or incremental and used on a limited basis, implementation is likely to be more successful. There is clear evidence that many innovations have suffered from lack of quality, practical, and useable resources. However, providing such packaged resources does not guarantee their appropriate use. McLauglin (1976) found that involving users in developing materials during implementation produced a sense of ownership of the innovation and an opportunity to learn underlying concepts of the projects.

Implementation strategy. The importance of quality and quantity of sustained interaction and staff development has been recognized in research. Hall & Loucks (1982) and others (Fullan, 1982) now recognize that implementation designs which assume and promote mutual adaptation are more successful than those stressing fidelity. Bird (1986) found that the key to support in staff development designed from a mutual adaptation perspective is providing support for experimentation. Teachers are encouraged to invent and shape curriculum in response to their contexts.

The key characteristics of successful staff development aimed at implementation are learning by doing, concrete role models, meetings with fellow implementers and resource consultants, specific teacher training activities, and on going support in the learning of the conceptual underpinnings necessary for using the innovation (Snyder, Bolin & Zumwalt, 1992). According to Argyris and Schon (1996) four organizational structures foster the development of theories-in-use in the course of implementation: (1) a forum in which dilemmas are expressed and examined, (2) procedures to guide individual interactive inquiry, (3) feedback systems, and (4) incentives for inquiry.

Teacher characteristics and orientations. Gross, Giacquinta, & Berstein (1971) found that teachers' knowledge, skills, and motivation to conform to the new model affect implementation. McLauglin and Berman (1977) add that attitudes of teachers are critical. Among the attitudes found to promote learning are commitment to hard work, commitment to clients, and confidence that the use of the innovation can produce real value for the client. In addition, Argyris and Schon (1996) stress that three facets of problem solving orientation affect learning : defensiveness, orientation to inquiry, and causal reasoning.

School factors. Four main school factors are found to influence implementation of curriculum or teaching innovations in recent research: adapting the structure of the organization to

the innovation, the principal's support, institutional goals, and ideologies, and students' attitudes and skills. Adapting the structure of the organization entails rearranging lesson schedules, the use of the school and the community, and decision making processes. Institutional goals and ideologies may support or conflict with the implementation of the innovation. Like teachers, students have needs which must be addressed in order for them to cooperate in curriculum enactment. Moreover, their level of skills may also interact with the implementation adaptation process (Fullan, 1982; Snyder, Bolin & Zumwalt, 1992).

The New Sociology Curriculum

Development of the curriculum. Sociology is one of the elective academic subjects that high school students may choose to study and be examined on for external matriculation for two or three credits. The current curriculum's course (180 hours) was modeled on a traditional university introductory course in sociology and focuses on passing on knowledge about highly abstract concepts and theories through a college-level textbook and readings and traditional lecture and recitation teaching methods. Students may elect to take an additional course which entails writing a research paper based a limited empirical study.

According to official rules of the Israeli Ministry of Education and Culture such curricula should undergo revision every five years. In 1989 the Ministry mandated a revision of the sociology curriculum.

A formative evaluation of the current curriculum was carried

out in order to determine the elements of the curriculum that needed revision. The findings of the evaluation found major gaps between teachers', students', and university professors' desired goals, contents and pedagogical principles for the sociology curriculum and the actual nature of the goals, contents and teaching strategies characteristic of the current curriculum. All stakeholders agreed that the goals of a new curriculum should emphasize developing critical thinking , the ability to apply sociological concepts, to develop knowledge and skills of sociological inquiry, that the contents of the course should be revised in line with the recent dynamic, pluralistic conceptions of the discipline and should be relevant to students from different cultural backgrounds, and that teaching strategies should promote active learning. In light of the contentious nature of multiculturalism in Israeli society, teachers and academics suggested that the curriculum should contribute to multicultural education, particularly by reducing prejudices and stereotypical thinking.

The evaluation study also found that the current curriculum materials were uninteresting for students and were geared at too abstract level for them. A third of the students had difficulty learning the contents and were unmotivated learners. In addition, the basic course did not prepare students for conducting and writing an empirical research paper.

Curriculum design and characteristics. Based on the formative evaluation the objectives, content, role of the

teacher, instructional strategies, materials, and evaluation methods of the sociology curriculum for the Israeli high school was revised. The new sociology curriculum is based as well on revised conception of the nature of sociology as a discipline today.

Sociology is a discipline that is dynamic and pluralistic. It is comprised of diverse theories and models of social processes and social structure which are being deconstructed and reframed by post-modernist and critical perspectives. Present sociological orientations view societies as open systems that are in a continual process of flux and change. The role of the sociologist is to raise questions about, to describe ,to explain, and to point to the social implications of patterns of human relations, the structure of social systems and social problems. The goals , contents structure and recommended teaching strategies of the curriculum reflect this conception of the discipline.

The principal educational objectives of the curriculum are:

1. Developing understanding and application of sociological concepts.
2. Developing the ability to analyze social phenomena and social problems using different sociological approaches and concepts.
3. Understanding and experimenting with sociological inquiry process.
4. Developing an understanding of Israel as a multicultural

society.

5. Developing tolerance for differences of opinion and an acceptance of the pluralistic nature of Israeli society.

6. Developing strategies for independent learning.

The selection and organization of the contents of the curriculum reflect its goals and conception of the discipline. Sociological questions that have been raised by sociologist about different aspects of society form the basic framework of the contents which are presented in the national syllabus (see Appendix). In each unit of the curriculum a series of central questions are raised for examination, discussion and study. A number of main ideas are developed in each unit. But, legitimacy is given to questioning and doubting some of these ideas. Each unit introduces students to basic concepts, to two theoretical perspectives, and to one or more social problems related to the unit.

In line with the adopted "transformative approach" to multicultural education, curriculum developers used Miller and Harrington's framework (Lynch, 1989) for the selection and organization of curriculum contents in order to reduce ethnocentrism and stereotypical thinking. The curriculum incorporates content about the cultural groups in Israeli society and their perspectives on themes, issues, and problems in each unit. Table 1 presents a outline of the design and highlights the foci of the multicultural contents of four units in the curriculum. These specific contents are chosen and presented in

ways that encourage the development of empathy, differentiated thinking, self-reflection, and positive attitudes towards diverse racial, ethnic and cultural groups.

The curriculum recommends the use of two main instructional strategies in order to achieve the curriculum's aims: inquiry methods and experiential learning. The contents of the curriculum introduce students to the ways that sociologists raise questions and hypotheses, gather information, analyze information, and draw conclusions. Inquiry exercises are provided for use in the classroom. These exercises are geared to learning sociological research approaches and methods as well as building concepts and main ideas in the curriculum. In addition, the curriculum requires the implementation of inquiry field studies alongside classroom instruction. Table 2 presents a summary of the design of inquiry experiences in the curriculum.

Experiential learning combines reflective thinking with the development of attitudes and emotions. The process of experiential learning entails six steps: establishing goals, experiential learning , reflective thinking about experience, building concepts and ideas, reporting and evaluating , diagnosing needs and establishing new goals. This model allows students to actively construct knowledge about the world and themselves. Experiential learning entails using teaching methods that bring the learner into closer active emotional interaction with the "real world" such as role playing, simulations, structured experiences, cooperative and collaborative group work,

field observation, film, and actual involvement with problems in the real world. These methods have been incorporated in the curriculum materials.

Curriculum materials for each unit in the curriculum consist of a student's textbook which contains exercises and readings , video cassettes containing movie segments for use with exercises, and a teacher's guide. The teacher's guide explains the rational for the unit and includes a variety of lessons plans and instructional activities. These lessons and activities provide teachers with guidelines for developing inquiry and experiential learning in the classroom. The curriculum recommends and provides guidelines in the teacher's guide for using a variety of evaluation methods for formative and summative evaluation of the achievement of the objectives of the curriculum.

The instructional and evaluation strategies recommended by the curriculum entail a major change in the roles of teachers and students in the sociology classroom. Teachers are encouraged to be facilitator of learning and collaborators with students in inquiry and experiential learning from multiple sources of knowledge . Students and teachers are expected to build mutual responsibility for learning.

Implementation of the New Sociology Curriculum

The strategy that guided the implementation of the new curriculum was one of adaptation rather than strict fidelity. First, the new curriculum would be implemented in a small number of classes on a trial basis and then revised before

implementation in the rest of the schools. Sociology teachers who were interested in learning about the curriculum and participating in the trial implementation participated in an in-service course which introduced them to the new syllabus, the pedagogical approach, and the first units of instruction. The subsequent trial implementation was supported by monthly staff development meeting, some supervision in the field, and formative evaluation and feedback procedures. The staff development meetings were run by the curriculum development team and included experienced sociology teachers. In these meetings teachers discussed : (a) their reactions and those of their students to the curriculum , (b) their assessment of achievement of the goals of the curriculum, (c) the problems that arose in using the curriculum, and (d) the ways that the problems could be resolved and the program improved. Teachers who participated in the trial received as an incentive in-service credits which contribute to their salaries.

Method

During the first year and half of the trial eight teachers implemented the curriculum in the eleventh and then the twelfth grades of seven high schools. A total of eight hundred students participated in the program during this period. All teachers had participated in the preparatory in-service training program and had volunteered to participate in the trial. The seven high schools represented a cross-section of academic and comprehensive high schools in the Jewish sector of the Israeli school system.

These high schools had heterogenous student population and were fairly traditional in their educational orientation.

All the teachers were experienced sociology teachers. Their experience teaching the current sociology curriculum ranged from six to twelve years. Two of the eight teachers were supervisors of social science teachers in different regions of the country. Seven out of the eight teachers also taught another social science or social studies course in their schools.

A variety of qualitative methods were used to gather data about the teachers' theories of action. Three methods were used to gather information about their espoused theories of action. Every two months a focus group discussion was held about the curriculum and recorded in written protocols or taped. Teachers were interview individually after the first five months of implementation. At the end of the first year teachers were asked to respond to a creative exercise in which they created metaphors for their perspectives on the curriculum and explain them. Information about teachers' theories- in- use were gathered from classroom observations and from personal teaching diaries that some of the teachers kept. An average of three lessons per teacher were observed during the first year. During the first half of the second year one observation was carried out in all classes and three teachers were observed on a weekly basis. The observers were trained students who had finished their B.A. degrees in Sociology. Observations included a detailed description and protocol of actions, activities, and discussions

in the class as well as structured assessment when cooperative activities took place using Johnson and Johnson's instrument for assessing cooperative learning activities. After each observation observers also compared the activities and learning process to those recommended in the teacher's guide.

In order to assess the degree and type of changes that occurred in the teachers' theories of action we divide our analysis into three time period : the first five months (Time 1), the last four months of the first year (Time 2) and the first five months of the second year (Time 3). These periods corresponded to the implementation of different units of the curriculum. During the first four months the first unit, Cultures in Israel and in the World, was taught. During the second period the first half of the unit, Groups- A Basic Unit of Society, was taught. In the third period this unit was completed and a new unit, Family --Continuation and Change, was started with the first cohort of students and simultaneously the teachers started teaching the unit on cultures for the second time to a new cohort of eleventh graders. The third period provides an interesting turning point in the implementation process. On the one hand the teachers were dealing with new materials with students in last year of high school and on the other hand continuing and repeating their implementation of the curriculum with a new group of eleventh graders.

Argyris and Schon's (1974, 1996) strategy for analyzing theories of action guided the analysis in this study. First, the

espoused theories and theories in use during the three time periods were described. Second, the governing variables of the theories, the extent of consistency in them, and the congruity between the espoused theory and theory-in-use were identified. Third, the degree and types of changes that occurred in the theories were distinguished. Based on this third phase of analysis, the extent and types of learning of each teachers from one time period to the next was determined. Lastly, I examined the conditions that fostered or hampered these changes.

Findings

Changes in Theories of Action

At the start of the trial all eight teachers expressed enthusiasm about their participation and a desire to learn how to implement the innovations. Only two teachers reported having used experiential methods of learning before that year. However, all had experience in supervising students in conducting a sociological research project. Six out of the eight teachers said that the curriculum's approach represented a major innovation for them and would require changes in their teaching approach.

Time 1. Our analysis of the teachers' espoused theories of action at the end of the first half a year found that two of the teachers had espoused theories that matched the core assumptions and strategies of experiential and inquiry learning. Two other teachers' espoused theories contained peripheral elements of these strategies and the other teachers' espoused theories had limited or no correspondence to that of experiential learning.

The majority of the teachers' theories-in-use reflected only mechanical limited use of experiential or inquiry learning. In the majority of cases elements of espoused theories and theories-in-use were internally inconsistent.

The majority of the teachers primarily underwent single looped learning during this period. They made changes in their teaching strategies by incorporating experiential learning activities which were outlined in the Teacher's Guide, while not changing elements of the main variables of their theory of action. Only one teacher underwent double looped learning by changing both conceptions of her espoused theory and her theory-in-use. Her development is outlined in Table 3 and will be described below.

Time 2. During the second half of the first year transitions in the espoused theories of the majority of the teachers occurred. Five out of the eight teachers voiced changes in their assumptions about the goals of sociology teaching, sources of knowledge, and the nature of learning. All of these changes were in line with experiential learning. Four out of these five teachers changed their theory-in-use in different ways to make it more consonant with their espoused theory. Thus, they underwent double looped learning during this period. One teacher made some additional change in her theory-in-use and thus showed some single looped learning. Two teachers did not report or show any additional transitions. At the end of the first year of implementation more than half (6) the teacher's had incongruent

espoused theories and theories-in-use whereas two teachers had more or less congruent theories which were consonant with experiential learning.

In the final meeting of the first year teachers were asked to create pictorial and verbal metaphors for the new curriculum, for the current sociology curriculum, and for two of the teaching methods emphasized during the course of the first year-- inquiry through observation and the jigsaw method. Figure 1 shows the pictorial metaphors for the new and old sociology curricula. Six out of eight teacher used words of praise to describe the new curriculum such as: "an open head", "flowering in the springtime", "refreshing ", "a blessing to the spirit". However, two teachers indicated that they viewed the program as "amorphous" or "unclear". In contrast, all the teachers described the old program in derogatory terms such as:"a car with a puncture that goes with difficulty," "a shelf crowded with books covered with dust," "a cell protected against the outside world" and "overloaded". However, their metaphors for two of the more complex teaching methods included in the pedagogical approach (see Figure 2) revealed that dilemmas of incongruence and inconsistency remained. The majority of the teachers found these teaching methods difficult to use and /or were not convinced of their value or effectiveness. All the teachers requested to continue using the new curriculum with their next cohort of eleventh graders. These responses indicated that the teachers generally valued the new curriculum .

During the first few months of the second year of implementations half the teachers underwent some additional learning and development. Two teachers changed both variables in their espoused theories and in their theories in use. Two other teachers made additional changes in their theories in use in line with experiential learning. One teacher maintained the changes made in her theory of action by the end of Time 2. In contrast to these teachers, three other participants in the trial reverted to aspects of the theory-in-use that characterized them during time 1.

During the first year and a half of the trial the majority of the teachers made various degrees of transition toward an experiential and inquiry theory of action. Their learning processes were very individual. However, three patterns of development in pedagogical theories of action can be discerned: (1) continuing double looped learning ,(2) limited double looped learning alternating with more predominant single looped learning and (2) very limited development during the first year and return to a more traditional theory of action during the first half of the second year.

Tables 3-5 present the main characteristics of the espoused theories and theories-in-use of three teachers who exemplify these three patterns. Teacher A is a supervisor of social science teachers in one of the regions of Israel. She was primarily attracted to the new curriculum by its pedagogical orientation which from beginning of implementation she claimed was similar to

hers. Core elements of her espoused theory of action were found to correspond with those of the new curricula by mid year (Time 1). However, significant inconsistencies existed in her espoused theory between her assumptions about learning, strategies of teaching, and her view of evaluation methods. She recognized this inconsistency as a dilemma. She felt that she needed to assess the effects of the new teaching strategies, but was not sure how to do this. During the first half of the year she made efforts to incorporate some of the recommended pedagogical activities in her teaching, particularly inquiry methods. She continually sought feedback from her students and tried to diagnose their cognitive difficulties and deal with them. In doing so she recognized the need to improve the effectiveness of her teaching strategies and evaluation methods. In staff development meetings she shared her problems and assessments with developers and other teachers and tried to improve her implementation of the new strategies by incorporating ideas from these exchanges.

During the second half of the year she changed and added important variables to her espoused theory and made it more consistent with the new pedagogical approach. By adopting new perspectives on evaluation methods she was able to resolve her dilemma of testing her theory of action. Consequently, she developed a more positive and differentiated evaluation of the effectiveness of the new pedagogy. She also changed her theory-in-use by focusing on developing the process and not just the products of learning. This period was marked by double looped

learning, making her espoused theory more consistent, and her theory-in-use more congruent with her espoused theory.

Her transition to the second year of implementation was marked by a desire to improve the program and its application to her students. Although concerned like several other teachers with the approaching matriculation exam for the twelfth graders in the program, she continued to be concerned with dealing with the affective side of the development of her students.

Teacher B is also an experienced social science teacher who supervisors teachers of citizenship education in a new curriculum project. She expressed the same enthusiasm as teacher A for the new curriculum at the start of implementation. In addition, she viewed her participation as a stepping stone to higher status in the education system. However, at mid-year (see Table 4) both her espoused theory and theory-in-use reflected few core elements of the new pedagogical approach. Her initial successes in stirring involvement and understanding of sociological concepts during the first few months convinced her of the potential effectiveness of this new pedagogical approach. She recognized that her theory-in-use was not congruent with her espoused theory and needed to be improved. She turned to developers and asked for feedback and guidance about implementing the new methods. Her efforts lead to some changes both in her espoused theory and in her theory-in-use. However, the dilemma of incongruence remained to a certain extent.

During the first few months of the second year of

implementation teacher B was faced with a number of problems in her twelfth grade class. The normative climate for twelfth graders in her school was one of preparation for the matriculation exams and anticipatory socialization for adult roles in the army. Her twelth grade students expected their sociology class to be similar to those of their other subjects which emphasized a college-like lecture-summarizing approach. They now viewed experiential learning as "childish" and "inquiry" assignments as a burden. Half the teachers reported similar responses to the program from their twelfth grade students. In addition, a sizeable group of students who were in an especially difficult pre-law program and wanted to be admitted to law school in the future decided that they would drop out of the class. Teacher B's self-esteem was severely injured. Her response was to lessen her commitment and involvement with this class and reduce her investment in the implementation of the new curriculum in this class.

In contrast, in her eleventh grade class she continued her investment and development of her theory-in-use making it more consistent. This was most probably encouraged by the assistance that student teachers assigned to this class gave her in implementing the program and the active involvement of one of the curriculum developers in helping her develop inquiry projects in this class.

Teacher C is an experienced social science teacher. At the start of the trial she expressed interest in the new pedagogical

approach, but seemed less clear about what it would mean. She had limited experience with the new methods. During the first half a year she made an effort to "try" some of the recommended lessons. She found the initial more simplified experiential lessons to be effective in simulating learning. However, her theory of action (espoused and in-use) remained highly traditional. The governing variables of her approach were teacher domination and limited investment in teaching. She used a variety of self-sealing tactics which reduced or dismissed feedback about the basic contradictions and distortions of the new methods in her implementation process. For instance, when she implemented the jigsaw method she viewed her role as a teacher eliminated after setting up the groups and their assignment. She sat with her back turned to the class or left the room for fifteen minutes at a time. An observer of the class spoke to her after the class and reported that the students had difficulties with the group assignment during the first stage of the process. She ignored the feedback and continued her removal of herself from the situation. At the end of the jigsaw process, she gave a lecture which summarized the conclusions or ideas that the students were supposed to learn on their own.

During the second time period there wasn't any significant change in her theory of action. She alternated in the classroom between a traditionally teacher centered approach and a laissez faire approach when she attempted cooperative learning or experiential activities. At the end of the first year she

expressed support for the use of cooperative learning methods because they gave the student total independent responsibility for learning. In practice, this was taken by her to mean release time and less commitment to the students and teaching preparation. She introduced some minor changes in her espoused theory leaving her theory-in-use untouched. However, her espoused theory was very inconsistent. She recognized the importance of affective outcomes of learning, but viewed such goals as inappropriate to the teaching of sociology. All the teachers received descriptive feedback about the nature of their implementation of the teaching strategies during the course of the year. A collaborative analysis by the teachers of this feedback lead to recommendations for how to improve implementation. However, these recommendations were ignored by teacher C.

This inconsistent theory of action basically continued to characterize her practice of teaching during the third time period with some minor changes. These changes were primarily introduced in response to the curriculum developers request that the teachers introduce the "portfolio" as a method of formative evaluation in the eleventh grade classes.

Factors Fostering and Hindering Reframing Theories of Action

Six types of factors had individual and interactive affects on the degree and nature of reframing theories of action: characteristics of the new sociology curriculum, the processes and procedures of staff-development and supervision, informal

peer groups, school/institutional culture, characteristics and responses of students in the eleventh and twelfth grades, and teacher characteristics and orientations.

The complexity of the pedagogical approach of the new curriculum made it difficult to understand and to implement during the first year of implementation. However, this approach was divisible, in that it was composed of a set of teaching strategies and practices that could be introduced incrementally and modularly. Initial activities during the first month of the trial entailed implementing simple experiential learning through teacher dramatization, the analysis of movie clips and short excercises with stimulating curriculum materials. The teacher's guide and staff development training activities provided significant support for the initial implementation these less complex strategies. Consequently, the initial activities lead to immediate positive learning outcomes which gave the initial leverage for reframing elements of teachers' theories-in-use during the first time period. The experience of experimenting successfully and gaining a personal sense of excitement and satisfaction provided a peak experience which had a significant impact on the teachers assessments of the new pedagogical approach. The enthusiastic responses of the eleventh graders to this "different" approach to learning reverberated outside of the sociology classroom. Teachers who received such feedback were stimulated to open themselves to continuous experimentation and reflection.

Monthly staff development meetings had two purposes which contributed in different ways to the change process : providing a forum for sharing and analyzing experiences implementing the curriculum and developing additional aspects of the curriculum. In sharing their experiences teachers raised difficulties, problems and questions which could be confronted and dealt with together. During the course of the first year the teachers worked with developers to define criteria and processes of evaluation that would be appropriate to the curriculum and could be used to assess cognitive and affective outcomes. The process of thinking through assessment and using instruments developed by the teachers themselves was for some of the teachers critical to their reframing of their assumptions about learning and teaching. Being involved in this process of development encouraged the teachers to delay drawing conclusions about the effectiveness of the general pedagogical approach until the end of the first year of implementation and to view evaluation as formative and not summative.

The degree of reframing of theories of action was also a function of the teacher's ability to take the role of an inquirer who participates in constructing the situation to which he also responds. Teachers who underwent double looped learning were inquirers who detected various mismatches between their theory of action and that of the new curriculum, between their espoused theory and their theory-in-use, and between their expectations and outcomes and worked on resolving them. They were less prone

to defensive tactics when they detected such mismatches. These teachers tended to be more committed to hard work and to their students.

Different factors hindered the change process during the first year of implementation and the second year. The key factors during first year were the mismatch between some of the materials and the teaching methods, teachers' and students' lack of skills, and lack of close supervision and feedback in the classroom. The primary event that brought these three factors to the fore was the first attempt to implement the jigsaw method. None of the teachers had the knowledge and skills necessary to implement the process with ease. Moreover, the materials prepared for the jigsaw activities were too difficult for the students. The students' lacked experience and skill in group work. Teachers let the process drag out over several lessons and found that students were unable to achieve the appropriate outcomes and responded negatively to the experience. For some of the teachers this experience raised a real threat of the loss of control. They became very defensive. Those for whom control was a governing variable of their theory of action refused to incorporate any aspect of cooperative learning in their implementation.

The factors that hindered change in the second year were institutional norms, the attitudes of twelfth graders,informal peer collaboration, and teacher characteristics and orientations. The twelfth grade in Israeli high schools is dominated by the matriculations exams which are administered in the spring. It is

during this year that there is a press towards conformity of students and teachers to norms of "coverage" rather than learning and inquiry. These norms brought forth negative reactions on the part of the twelfth grades to the pedagogical approach of the new curriculum. Some of the teachers responded to these pressures by reverting to their more traditional approach. This was particularly true in the case of teachers who were similarly inclined and worked as an informal team .

An additional factor that affected the ability of teachers to develop was their involvement with other competing professional activities and their work load. A few of the teachers added significantly to their professional responsibilities during the second year of implementation. One became an assistant principal, another a supervisor and a third took on additional classes to instruct. Some had very large classes of 35 to 40 students. They did not have the time or resources to invest adequately in reflection and change.

Mutual Adaptation Process

The implementation process during the first year lead to revision in the sequence of contents, instructional strategies, and materials of the curriculum. In light of the success with more simplified experiential and inquiry lessons and the difficulties with more complex ones, their sequence was reordered in order to build teachers' and students' skills with learning as well as a movement to more collaborative sharing of control more gradually. The materials were also revised to match them more

fully to the models of teaching and to the levels of reading of the students. In addition, the length of the units of instruction were shortened so that less pressure for coverage would be placed on teachers and students in the twelfth grade.

Discussion

This study's findings support the conclusion of previous research (Fullan, 1982; Berman & McLauglin, 1977) that complex innovations are difficult to implement, but enhance the possibility of significant educational change. The new Israeli sociology curriculum represents a comprehensive a theory of action that is an innovation for Israeli teachers and the Israeli high school. In order to implement this new curriculum teachers had to change their theories of action. Our findings indicate that during the course of the implementation process half of the teachers made considerable modification of their theories of action to bring it in line with that of the curriculum. These teachers underwent double looped learning and changed core assumptions about learning , teaching strategies, and role relations. However, they reframed their theories in very different ways. The other half of our sample only made peripheral changes in their theories of action.

Argyris and Schon (1974, 1996) have identified various dilemmas that professionals may face when they interact with the world. Change derives from the recognition and response to dilemmas. The findings of the study indicate that dilemma recognition and response are important parts of the process of

change entailed in implementing a new curriculum. The key dilemmas that emerged for teachers were incongruity between the espoused theory and theory-in-use, dilemmas of testability, and effectiveness. Those teachers who took the stance of inquirers were able to learn from implementing the curriculum and benefitted from the staff development processes. Consequently, they reframed their theories of action. The staff development processes that fostered these changes were on the one hand reflective deliberation about the experiences and problems of implementation and on the other hand involving the teachers in developing the evaluation component of the curriculum and adapting and revising the curriculum. Clearly the staff development provided was not sufficiently intensive and developed to promote development of all of the teachers.

Factors found to hinder implementation and changes in theories of action were the attitudes, skills, professional commitments and workloads of teachers, and institutional norms. Teachers who were not committed to hard work or to their clients, who were not skilled in some of the new methods, and who were defensive made limited changes. The institutional norms in the twelfth grade pushing for a return to traditional modes of teaching and learning contributed as well to limiting change .

Teacher's evolving theories of action and experiences with implementing the curriculum lead to significant changes in the shape, but not the basic principles and goals of the curriculum.

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Table 1: **The Design of the Contents to Foster Multi-cultural Education**

Contents	Units			
	Culture	**Group**	**Family**	**Socialization**
Representation Israel Other	Religious Secular, ethnic, minorities Middle East European American	Ethnic army, minorities Middle East American	Religious, kibbutz, minorities Middle East European American	Immigrants, religious, secular, Palestinian,
Perspectives	Ethnocentrism vs. cultural relativism	Personal	Phenomenology Changing cultural perspectives	Gender Ecological
Self-reflection	Categorization, stereotypes	Reference groups, conformity	Definitions of family	
Intergroup Education	Types of intercultural relations	Cooperation and conflict among groups		

Table 2: **Inquire Experiences in the Sociology Curriculum**

Inquiry Method	Units			
	Culture	**Groups**	**Family**	**Socialization**
Research model	Qualitative field study	Experiment class/field	Social problem	Secondary analysis
Select topic	Sub-topic selection	Select type of experiment	Select problem	Select theory
Define problem	Questions for interview	Questions and variables	Issue and questions	Questions about gender socialization
Review literature				Review some literature
Hypothesize	Assumptions	Hypothesize		Operational hypothesis
Collect data	Participant observation and semi-structured interview	Structured observation	Content analysis of media	Research done by sociologists
Analyze	Compare assumptions to findings	Support or disprove hypothesis	Comparison of perspectives	Analyze research findings

Table 2: **Inquire Experiences in the Sociology Curriculum** (cont.)

Inquiry Method	Units		
	Organizations	**Stratification**	**Social Change**
Research model	Case study	Survey	Historical
Select topic	Focus	Sub-topic	
Define problem	Questions	Problem specification	
Review literature			
Collect data	Observation, interview, documents	Data from national survey	Retrospective interview
Hypothesize	Outline assumption	Hypothesize	
Analyze	Portrait of an organization and comparison of organizations	Statistical	Synthesize historical information, chart trends

Table 3: **Case A: Governing Variables of Espoused Theory and Theory-in-Use**

Variables	Time 1	Time 2	Times 3
Espoused Theory			
Assumptions:			
Knowledge	Multiple sources	Different interpretations	
Learning	Structured experience develops thinking	Questioning enhances motivation to learn	
Goals	Thinking, attitude Learning skills	Inquiry skills	
Role relations	High structure Teaching control	Joint task planning	
Teaching strategies	Variety, but inquiry most successful	Real world activities	Allowing for divergence
Evaluation methods	Testing reliable Alternative methods impressionistic	Written assignments reliable	Matching methods to teaching
Testability	Dilemma: needed but unclear how	Able to assess impact on cognitive & affective domains	
Theory-in-use			
Goals	Knowledge, skills inquiry	Applying concepts to real life; building a learning sequence	
Role relations	Teacher control	Student as origin	
Teaching strategies	Scientific inquiry	Student questions & experiences begin learning cycle	
Evaluation methods	Informal feed-back	Diagnostic	

Table 4: **Case B: Governing Variables of Espoused Theory and Theory-in-Use**

Variables	Time 1	Time 2	Times 3
Espoused Theory			
Assumptions:			
Knowledge	New viewpoints valuable	Experience is a source	
Learning	Students & teachers views differ	Active learning produces cognitive & affective outcomes	Experiential methods lead to learning ***Sanctions lean responsibility***
Goals	Excitement about learning	Affective, cognitive, responsibility	Self-motivated responsible learners
Role relations	Collaborate	Teacher as facilitator	
Teaching strategies	Inquiry & group work desirable but problematic	Experiential as games with rules	
Evaluation methods	Feedback from students & class interactions	Testing for cognitive & informal evaluation	
Testability	Affects & problems identifiable	Unclear evidence of knowledge gains	Formal & informal evidence
Theory-in-use			
Goals	Responsible learners		***Cover material, inquiry, thinking, reduce stereotypes Responsibility***
Role relations	Teacher control	Moderate control	Joint task control ***Teacher control***
Teaching strategies	Mix of traditional & new	Mechanical use of new	Mixed & experiential Mixed
Evaluation methods	Individual testing	Testing	Projects & portfolio ***Testing & assignments***

Note

Theory of action for the 12th grade class is italicized

Table 5: **Case C: Governing Variables of Espoused Theory and Theory-in-Use**

Variables	Time 1	Time 2	Times 3
Espoused Theory			
Assumptions:			
Knowledge	Source experts	Sources summaries, news	Multiple sources including students
Learning	Experiential learning has affect, but not in sociology	Learning game differs for teacher & student. Student needs to be forced to accept responsibility	
Goals	Knowledge	Responsibility for learning, knowledge	
Role relations	Strong teacher control	Teacher control or laissez-faire	Teacher control with student involvement
Teaching strategies	Movies have affects; cooperative limited	Mechanical mix of tradition & new	Mix traditional & new
Evaluation methods	Tests, Feed-back from students not sought	Tests	Tests & papers
Testability	Not sought	Limited desirability	
Theory-in-use			
Goals	Reduce teacher's work, give total responsibility to student	Limited teacher's investment, give responsibility to student, thinking	Coverage, thinking
Role relations	Teacher dominates teacher as actor	Teacher dominates or laissez-faire	Teacher dominates, some collaboration
Teaching strategies	Limited preparation, traditional & cooperative	Summarizing, mix traditional & new limited	Primarily traditional & limited new ***tradition & movies***
Evaluation methods	Tests	Tests	Tests & assignment

Note

Theory of action for the 12th grade class is italicized

Figure 1A
Metaphors for the New Curriculum

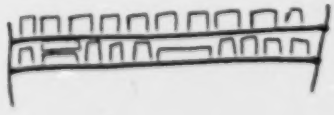
thirst quenching,
refreshing

a sharp amorphous object
in a bathtub

As flowering in the spring..

An open head

Bright eyes



an organized book shelf,
neat after I organized it

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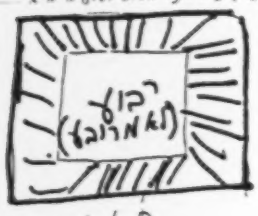
Figure 1B
Metaphors for the Current Curriculum



Overloaded, not allowing experience
Drowning in a sea of concepts

Help!

A square not squared,
A cell shielded from
the outside world.

A car with a puncture.
going with difficulty.

A shelf crowded with disorganized
dusty books

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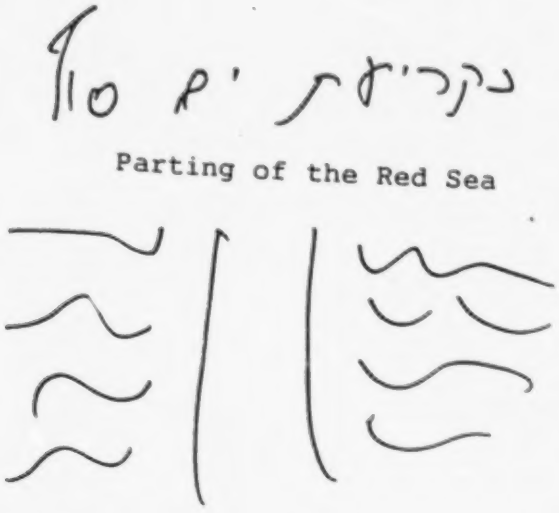
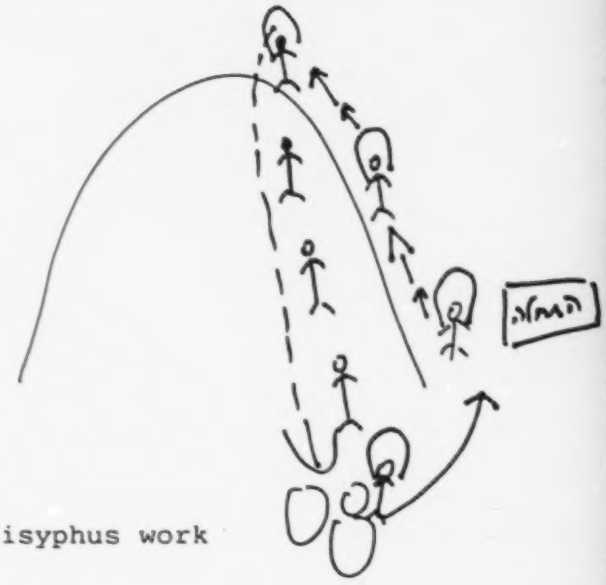
Figure 2
Metaphors for the Jigsaw Method and Inquiry through Observation

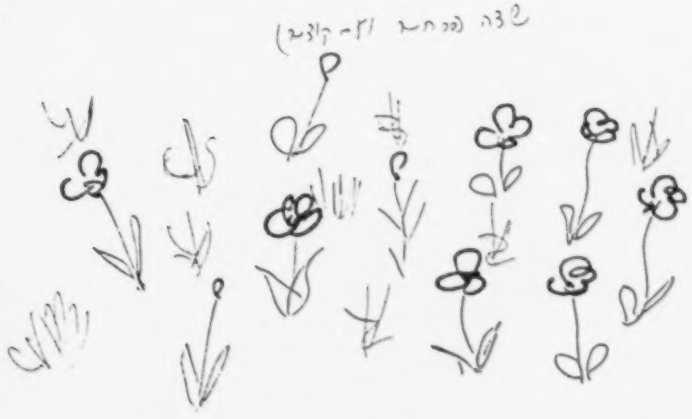


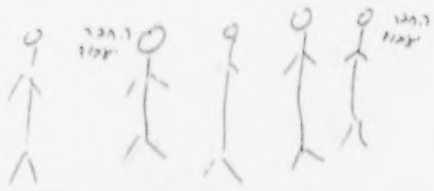
Parting of the Red Sea



Sisyphus work

A field of flowers
(with thorns)





Count on me.....
dispersion of responsibility

A ball without an exit

Always one part is missi

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